IS 8927-1 (1978): Haversacks, Part I: for Railway Personnel
[TXD 20: Made-up Textiles]

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Indian Standard

SPECIFICATION FOR HAVERSACKS

PART I FOR RAILWAY PERSONNEL

UDC 685·514·32 : 656·2·071

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

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Indian Standard

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PART I FOR RAILWAY PERSONNEL

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Indian Standard

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PART I FOR RAILWAY PERSONNEL

0. FOREWORD

0.1 This Indian Standard (Part I) was adopted by the Indian Standards Institution on 1 September 1978, after the draft finalized by the Made-Up Textile Items Sectional Committee had been approved by the Textile Division Council.

0.2 This standard (Part I) is based on the IRS Drawing No. 7343/1.A 'Haversacks for Patrolmen' issued by the Southern Railway, Government of India.

0.3 The requirements of other types of haversacks (notably those used in the Services) shall be covered in the subsequent parts.

0.4 To familiarize the industry with International System of Units (SI Units), the basic SI Units as well as the recommended SI Units for use in the textile industry are given in Appendix A.

0.4.1 Standards of Weights and Measures Act, 1976 also stipulates use of SI Units.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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1. SCOPE

1.1 This standard (Part I) covers haversack for railway personnel (notably patrolmen).

2. MATERIALS

2.1 The requirements of various materials used in the manufacture of haversack are given in Table 1.

*Rules for rounding off numerical values (*revised*).

TABLE 1 MATERIALS USED IN THE MANUFACTURE OF HAVERSACK

(*Clause* 2.1)

Sl No.	Material	Requirements
(1)	(2)	(3)
i)	Cotton canvas	Conforming to Variety No. 2 of IS : 1424-1977*
ii)	Webbing:	Conforming to IS : 6488-1975†
	a) Thick	19, 25 and 51 mm wide
	b) Thin	19, 51 and 102 mm wide
	c) Extra wide thin	115, 300 and 325 mm wide
iii)	Cotton sewing thread:	Of matching shade and conforming to IS : 1720-1969‡
	a) For machine stitching	27 tex × 9 ($22^s/9$) or 25 tex × 9 ($24^s/9$)
	b) For hand stitching	16 tex × 6 ($36^s/6$)
iv)	Brass buckle, 25 mm size	IS : 4274-1967§
v)	Quick release buckle, 20 mm size	IS : 8740-1978‖
vi)	Brass tips, 20 and 50 mm size	IS : 6021-1978¶
vii)	Aluminium eyelets, size 24	IS : 4084-1978**
viii)	Snap fastener	IS : 4741-1968††
ix)	Plywood	—
x)	Slide fasteners (brass zips)	IS : 3148-1978‡‡

*Specification for cotton canvas (*second revision*).
†Specification for cotton webbing for personal web equipment (*first revision*).
‡Specification for cotton sewing threads (*first revision*).
§Specification for buckles.
‖Specification for buckles, pack, outer, PTRM.
¶Specification for web-equipment and 6·6-mm eyelets, painted rim with or without washer (*first revision*).
**Specification for eyelets and washers (*first revision*).
††Specification for snap fasteners (four pieces).
‡‡Specification for metallic slide fasteners (*second revision*).

3. MANUFACTURE

3.1 The isometric view of haversack is given in Fig. 1.

3.2 The haversack shall meet dimensional requirements given in Fig. 1. The manufacturing details are also given in the figure.

3.3 The webbings shall be cut clearly and the cut edges shall be neatly turned-in. The machine stitching shall be carried throughout. The number of stitches should be 25 to 30 per decimetre and all the loose ends shall be securely fastened. The brass fittings shall be well made, polished and securely fitted. The top corner joints of haversack shall be reinforced with machine or hand-stitching.

3.4 In respect of shade, tone and other requirements not covered in this standard, the haversack shall not be inferior to the agreed sealed sample in the contract or order.

4. MARKING

4.1 Each haversack shall be legibly marked with indelible ink in the centre with the following, the height of letters being 10 mm, *Min*:

a) Manufacturer's name, initials or trade-mark;

b) Year of manufacture;

c) Overall length (mm), width (mm) and height (mm); and

d) Any other information desired by the purchaser.

4.1.1 The haversack may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

5. PACKING

5.1 The haversacks shall be packed as specified in the contract or order.

NOTE — If so specified by the purchaser, these may be packed as follows:

Each haversack shall be pressed flat. Five such haversacks shall be tied with jute twine to form a bundle. Twelve such bundles placed side by side shall be wrapped in polyethylene film (*see* IS : 2508-1963*) of at least 40 microns or waterproof paper (*see* IS : 1398-1968†) and then in heavy cee jute cloth (*see* IS : 3751-1966‡) or in two layers of hessian (*see* IS : 2818§) to form a compact bale of rectangular shape.

The overlapping of inner layer shall be at least 10 cm so as to ensure full protection to the contents of the bale. The overlapping of the outer layer shall be such that it can be properly and securely sewn at the sides of the bale.

The bale shall be stitched with double 3-ply jute twine with not less than 12 stitches/dm taking care not to pierce the contents of the bale during stitching. Sufficient cloth (heavy cee or hessian) shall be pulled out at each corner to form ears of about 15 cm in length. The gross mass of the bale shall not normally exceed 40 kg.

6. SAMPLING

6.1 The sampling, inspection and testing scheme shall be as specified in the contract or order.

NOTE 1 — For selecting a suitable single, double or multiple sampling plan, IS : 2500 (Part I)-1973‖ may be referred.

NOTE 2 — Generally an acceptance quality level (AQL) of 4 percent is used for the textile stores.

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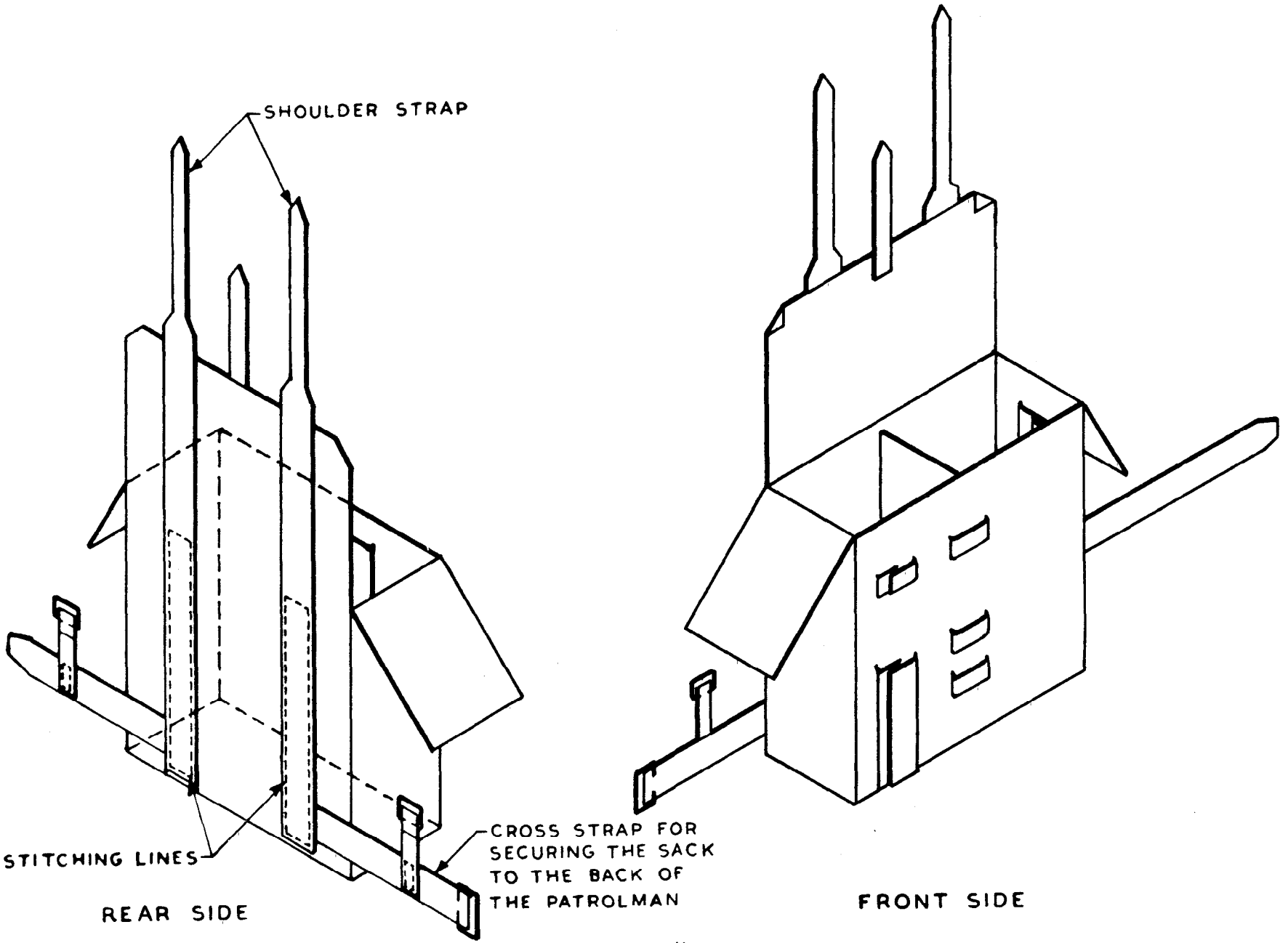
*Specification for low density polyethylene films.

†Specification for packing paper, waterproof, bitumen-laminated (*first revision*).

‡Specification for heavy cee cloth.

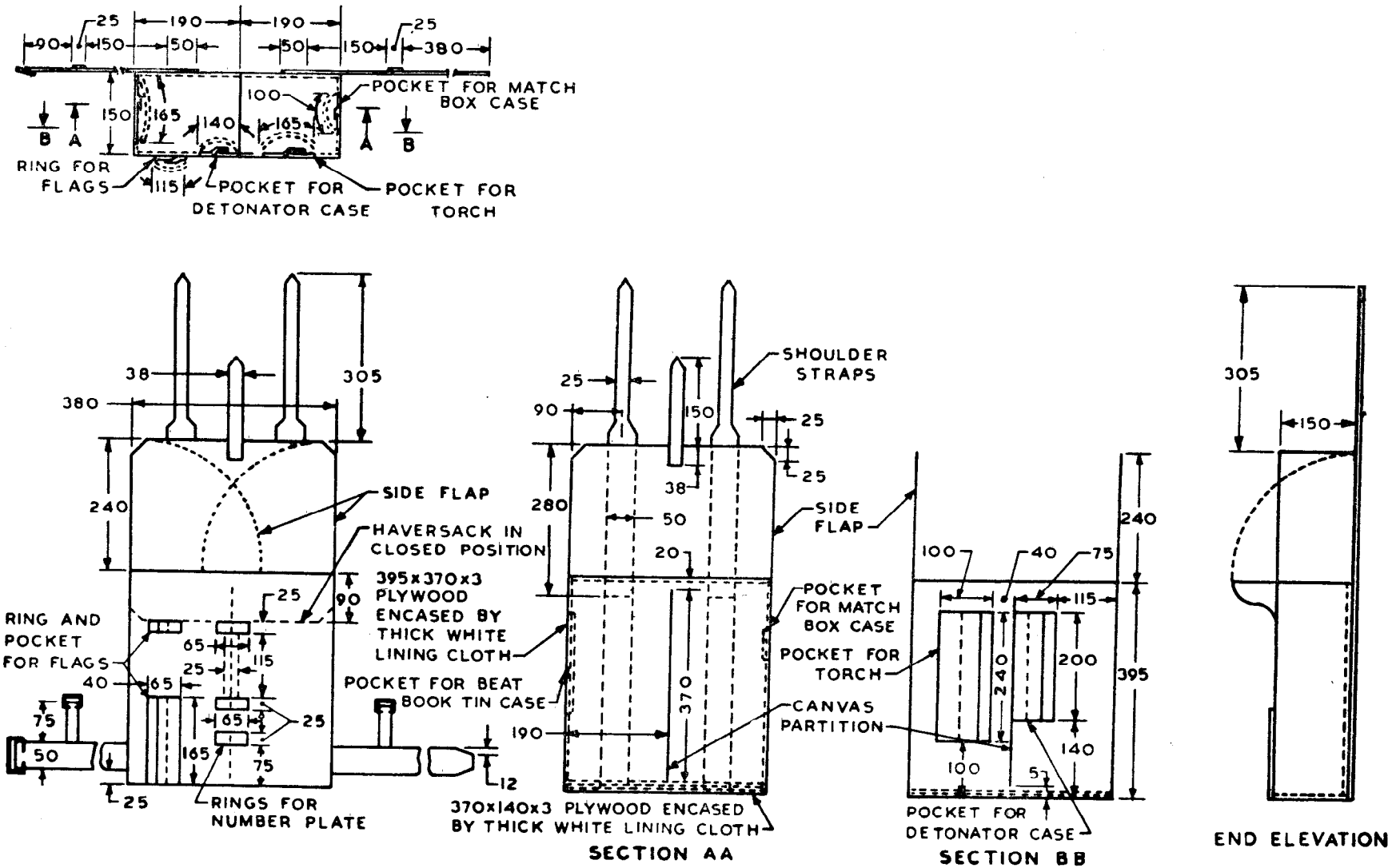
§Specification for Indian hessian.

‖Sampling inspection tables: Part I Inspection by attributes and by count of defects (*first revision*).



1A Isometric View

FIG. 1 HAVERSACK FOR RAILWAY PERSONNEL — *Contd*



1B Manufacturing Details and Dimensions

NOTE — Maximum opened position of pockets shown dotted.

All dimensions in millimetres.

FIG. 1 HAVERSACK FOR RAILWAY PERSONNEL

APPENDIX A

(*Clause* 0.4)

SI UNITS

TABLE 2 INTERNATIONAL SYSTEM OF UNITS

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	CONVERSION
Force	newton	N	1 N = 0·101 972 kgf
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m^2
Frequency	hertz	Hz	1 Hz = 1 c/s (s^{-1})
Electric conductance	siemens	S	1 S = 1 A/V
Pressure, stress	pascal	Pa	1 Pa = 1 N/m^2

TABLE 3 RECOMMENDED SI UNITS FOR TEXTILES

Sl No.	Characteristic	SI Unit		Application
		Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)
1.	Length	Millimetre	mm	Fibre
		Millimetre, centimetre	mm, cm	Samples and test specimens (as appropriate)
		Metre	m	Yarns, ropes and cordages, fabrics
2.	Width	Millimetre	mm	Narrow fabrics
		Centimetre	cm	Other fabrics
		Millimetre, centimetre	mm, cm	Samples and test specimens (as appropriate)
		Centimetre, metre	cm, m	Carpets, druggets, *DURRIES* (as appropriate)
3.	Thickness	Micrometre (micron)	µm	Delicate fabrics
		Millimetre	mm	Other fabrics, carpets, felts
4.	Linear density	Tex	tex	Yarns
		Millitex	mtex	Fibres
		Decitex	dtex	Filament and filament yarns
		Kilotex	ktex	Slivers, ropes and cordages
5.	Diameter	Micrometre (micron)	µm	Fibres
		Millimetre	mm	Yarns, ropes, cordages
6.	Circumference	Millimetre	mm	Ropes, cordages
7.	Threads in cloth:			Woven fabrics (as appropriate)
	a) Length	Number per centimetre	ends/cm	
		Number per decimetre	ends/dm	
	b) Width	Number per centimetre	picks/cm	
		Number per decimetre	picks/dm	
8.	Warp threads in loom	Number per centimetre	ends/cm	Reeds
9.	Stitches in knitted cloth:			Knitted fabrics (as appropriate)
	a) Length	Courses per centimetre	courses/cm	
		Courses per decimetre	courses/dm	
	b) Width	Wales per centimetre	wales/cm	
		Wales per decimetre	wales/dm	

(*Continued*)

TABLE 3 RECOMMENDED SI UNITS FOR TEXTILES — *Contd*

Sl No.	Characteristic	SI Unit		Application
		Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)
10.	Stitch length	Millimetre	mm	Knitted fabrics Made-up fabrics
11.	Mass per unit area	Grams per square metre	g/m^2	Fabrics
12.	Mass per unit length	Grams per metre	g/m	Fabrics
13.	Twist	Turns per centimetre	turns/cm	Yarns, ropes (as appropriate)
		Turns per metre	turns/m	
14.	Test or gauge length	Millimetre, centimetre	mm, cm	Fibres, yarns and fabric specimens (as appropriate)
15.	Breaking load	Millinewton	mN	Fibres, delicate yarns (skeins or individual)
		Newton	N	Strong yarns (individual or skeins), ropes and cordages, fabrics
16.	Breaking length	Kilometre	km	Yarns
17.	Tenacity	Millinewton per tex	mN/tex	Fibres, yarns (individual or skeins)
18.	Twist factor or twist multiplier	Turns per centimetre × square root of tex	turns/cm × $\sqrt{\text{tex}}$	Yarns (as appropriate)
		Turns per metre × square root of tex	turns/m × $\sqrt{\text{tex}}$	
19.	Bursting strength	Newton per square centimetre	N/cm^2	Fabrics
20.	Tear strength	Millinewton	mN	Fabrics (as appropriate)
		Newton	N	
21.	Pile height	Millimetre	mm	Carpets
22.	Pile density	Mass of pile yarn in grams per square metre per millimetre pile height	$g/m^2/mm$ pile height	Pile carpet
23.	Elastic modulus	Millinewton per tex per unit deformation	mN/tex/unit deformation	Fibres, yarns, strands

INDIAN STANDARDS

ON

MADE-UP TEXTILE ITEMS

IS:

5595-1970 Postal bags

7609-1975 General requirements for tents

8857-1978 Canvas water buckets

8928-1978 *CHAGUL*